

Dowagiac Union Schools
Transportation Department Radio System
Bid Specifications

The Dowagiac Schools seek bids for a new UHF Radio system. This system shall be of the highest quality using the latest technology. All Radios shall be capable of both Wide Band (25Khz) and Narrow Band (12.5Khz) operation. The following major components shall be listed separately with pricing for each category.

Item 1

100 Watt UHF Repeater capable of 100% Duty cycle operation.

The repeater shall be capable of at least 16 individual access codes and programmable over the 450Mhz to 480Mhz range. Repeater should be capable of both wide band and narrow band operation. Unit shall have at least 5 programmable control buttons which can control functions such as "Repeat Enable/Disable" "TX Disable" "Monitor"

The repeater shall be supplied with a "Band-Pass/Band Reject" type duplexer similar to the Sinclair Q3220E-1 or equalivent.

Repeater shall be supplied with its own DC Type power supply and housed in a 19in Rack mount type cabinet with locking front and rear doors. Doors should be vented.

A lightning arrestor such as the Polyphaser IS-50CN2 shall be mounted in the cabinet and used as the connection from the cabinet to the antenna feed line.

Item 2

Antenna and feedline

The antenna shall be at least 8.5db in gain and of heavy duty construction similar to the DB-420 UHF antenna. The antenna shall be supplied with a heavy duty galvanized mount kit. Transmission feedline shall be of 7/8 copper heliax type cable at least 150ft in length. The cable shall be supplied with grounding kits at both the top and bottom of the feedline. N-type female RF fittings and appropriate RF patch cables shall be supplied to connect the feedline to the Repeater cabinet and antenna. The antenna shall be secured to the support structure with a cable hoisting grip and further secured with UV resistant cable ties at least every 4ft.

Item 3

Mobile Radios

The mobile radios shall be fully programmable over the 450 to 470Mhz frequency range. They shall be capable of both wide and narrow band operation and have programmable GPS support functions for future GPS tracking. GPS tracking will not be required currently; however, the mobile radios shall have internal com ports to facilitate future GPS features. Radios shall have features such as the Kenwood TK-8180 or equalivent Radios shall be 45Watt units supplied with 5db gain antennas with spring mounts similar to the Maxrad MWU4505. Qty required: (18).

Item 4

Portable Radios

Portable radios covering the 450 to 470Mhz frequency band. Capable of both wide band and narrow band operation. Radios shall be supplied with a rapid rate 1hr charger, high capacity nicad battery pack, belt clip, and antenna... Radios shall have an alpha-numeric display with at least 8-charaters and capable of at least 32 channels.

Qty required: (6)

Item 5

Mobile radios other (Lower power and no GPS capability)

Mobile radios shall be fully programmable over the 450 to 470Mhz frequency range. Radios shall be 25 watt units supplied with 5 db gain antennas with spring mounts similar to the Maxrad MWU4505. Qty required: (3)

Item 6

Installation of Repeater, feedline, antenna

Labor required to install the repeater ,antenna, and feedline on a Radio Tower or water tank. Tower crew to be fully insured with a minimum of 2,000,000 liability insurance. Compliance with all OSHA regulations will strictly be adhered to.

Item 7

Installation of new radios

Labor required to remove existing radios from the buses and pickups. Required installation of the new radio; including wiring supplies, antennas, butt connectors, wire loom, tape, sealants, tie wraps, or ancillary supplies required to perform a complete installation shall also be included in this price.

Item 8

Control station

A uhf control station radio of the same model supplied for the buses with DC power supply, external Omni-Directional antenna with at least 4.5db of gain and enough cable to mount antenna 35ft up the customer supplied tower.. Cable shall be 3/8in dia such as LMR-400 cable with RF connectors and any RF patch cables necessary to provide a complete installation. The control station radio shall be interfaced to a DC remote adaptor to enable it to be interfaced to the existing remote control DC type desk sets. Any interfacing labor shall be included in the price of the control station. The labor to install the control station and antenna shall be included in the price of the control station.

Item 9

FCC License

A fee for an appropriate FB2 repeater and radios (license shall be supplied to the school district).

Price on trade in of old radios

General Notes:

All programming of supplied radios shall be included in the price of the radios, no additional fees shall be charged for any component or part of the system that is not specifically noted in quotation supplied by the vendor. All prices shall be good for 45 days from submission. All radios shall have a 2yr warranty.

Legal Disclaimers

Bid opening: Date:___May 5, 2008_____ Time:___2:00 p.m.___.

Bids Marked **Transportation Radio System Bid.**

Any questions regarding the specifications should be directed to Kevin Kelm, Transportation Supervisor (269) 782-4482. Sealed bids to be directed to attn: Mr. Hal Davis, Asst. Supt. and be clearly marked "Transportation Radio System Bid". The district reserves the right to reject any and all bids.

100 Watt UHF Repeater

Antenna and feedline

Mobile Radios

Portable Radios

Mobile radios other (Lower power and no GPS capability)

Control station

FCC License

Price on trade in of old radios

Bid

Total:	_____